In the Claims:

Please cancel claims 2 and 23; and amend claims 1, 3, 4, 12, 22, 24 and 25 as follows:

1. (currently amended) A method of orthogonal frequency-division multiplex (OFDM) communication via a plurality of subchannels within a noncontiguous wideband channel, said method comprising:

receiving a reference signal transmitted over each subchannel in said plurality of subchannels within said wideband channel;

producing a modulation profile of said wideband channel, wherein said modulation profile is responsive to a signal-to-noise ratio (SNR) for each subchannel in said plurality of subchannels within said wideband channel, wherein said producing activity comprises

establishing a least-SNR requirement,

determining said SNR for each of said subchannels in said plurality of subchannels within said wideband channel, and

designating each of said subchannels having an SNR greater than said least-SNR requirement as a clear subchannel; and

transmitting OFDM data in response to said modulation profile.

2. (canceled)

3. (currently amended) An OFDM communication method as claimed in claim [[2]] 1 wherein said producing activity additionally comprises:

establishing a least-quality-of-service requirement; and

optimizing a throughput of each of said clear subchannels in which a quality-of-service is greater than said least-quality-of-service requirement.

4. (currently amended) An OFDM communication method as claimed in claim [[2]] 1 wherein said producing activity additionally comprises:

establishing a least-throughput requirement; and

optimizing a quality-of-service of each of said clear subchannels in which a throughput is greater than said least-throughput requirement.

5. (previously presented) A method of orthogonal frequency-division multiplex (OFDM) communication via a plurality of subchannels within a noncontiguous wideband channel, said method comprising:

producing a modulation profile of said wideband channel, wherein said modulation profile is responsive to a signal-to-noise ratio (SNR) for each subchannel in said plurality of subchannels within said wideband channel including

establishing a least-SNR requirement,

determining said SNR for each of said subchannels in said plurality of subchannels within said wideband channel,

designating each of said subchannels having an SNR greater than said least-SNR requirement as a clear subchannel,

sorting said subchannels by said SNRs therein,

adjusting said least-SNR requirement,

determining said SNR for each of said subchannels in said plurality of subchannels within said wideband channel, and

designating each of said subchannels having an SNR greater than said adjusted least-SNR requirement as an impeded subchannel; and

transmitting OFDM data in response to said modulation profile.

6. (original) An OFDM communication method as claimed in claim 5 wherein said producing activity additionally comprises:

determining a noise level for each of said clear and impeded subchannels; and

determining an OFDM data-signal level for each of said clear and impeded subchannels, wherein a subchannel energy level is substantially equal to said OFDM data-signal level for each of said clear subchannels, and said subchannel energy level is substantially equal to a sum of said OFDM data-signal level plus said noise level for each of said impeded subchannels.

7. (original) An OFDM communication method as claimed in claim 1 additionally comprising iterating said producing and transmitting activities to track changes in said SNR in each subchannel of said plurality of subchannels within said wideband channel.

8. (original) An OFDM communication method as claimed in claim 1 wherein said producing activity comprises:

scanning said wideband channel; and

determining said SNR for each of said subchannels in said plurality of subchannels within said wideband channel in response to said scanning activity.

9. (previously presented) A method of orthogonal frequency-division multiplex (OFDM) communication via a plurality of subchannels within a noncontiguous wideband channel, said method comprising:

producing a modulation profile of said wideband channel, wherein said modulation profile is responsive to a signal-to-noise ratio (SNR) for each subchannel in said plurality of subchannels within said wideband channel including

scanning said wideband channel, and

determining said SNR for each of said subchannels in said plurality of subchannels within said wideband channel in response to said scanning activity, comprising ascertaining usable ones of said subchannels in response to said SNR of each of said subchannels, and estimating a bit error rate for each of said usable subchannels; and

transmitting OFDM data in response to said modulation profile.

10. (original) An OFDM communication method as claimed in claim 9 wherein said transmitting activity transmits said OFDM data signal in response to said bit error rate of each of said usable subchannels.

11. (previously presented) A method of orthogonal frequency-division multiplex (OFDM) communication via a plurality of subchannels within a noncontiguous wideband channel, said method comprising:

producing a modulation profile of said wideband channel, wherein said modulation profile is responsive to a signal-to-noise ratio (SNR) for each subchannel in said plurality of subchannels within said wideband channel including

scanning said wideband channel, and

determining said SNR for each of said subchannels in said plurality of subchannels within said wideband channel in response to said scanning activity, comprising ascertaining usable ones of said subchannels in response to said SNR of each of said subchannels, and estimating a throughput for each of said usable subchannels; and

transmitting OFDM data in response to said modulation profile.

12. (currently amended) A method of orthogonal frequency-division multiplex (OFDM) communication via a plurality of subchannels within a noncontiguous wideband channel, said method comprising:

producing a modulation profile of said wideband channel, wherein said modulation profile is responsive to a signal-to-noise ratio (SNR) for each subchannel in said plurality of subchannels within said wideband channel; and

transmitting OFDM data in response to said modulation profile; and

wherein said transmitting activity transmits said OFDM data over the plurality of subchannels, from which more than one user channel is formed and concurrently supported.

13. (previously presented) An OFDM communication method as claimed in claim 12 wherein each of said user channels comprises at least one of said subchannels.

14. (previously presented) An OFDM communication method as claimed in claim 13 wherein:

said producing activity additionally comprises designating each of said subchannels having said SNR less than said least-SNR threshold and greater than an SNR-evaluation threshold as an impeded subchannel; and

said transmitting activity transmits said OFDM data so that each of said impeded subchannels receives said OFDM data at said intermediate subchannel signal level.

15. (original) An OFDM communication method as claimed in claim 14 wherein:

said producing activity comprises determining a signal-to-noise ratio (SNR) for each of said subchannels in said plurality of subchannels within said wideband channel;

said producing activity additionally comprises designating each of said subchannels

having said SNR greater than a least-SNR requirement as clear subchannel; and

said transmitting activity transmits said OFDM data so that each of said clear subchannels receives said OFDM data at said maximum subchannel signal level.

16. (original) An OFDM communication method as claimed in claim 15 wherein, said least-SNR requirement is a first least-SNR requirement, and wherein:

said producing activity additionally comprises adjusting said least-SNR requirement to produce a second least-SNR requirement;

said producing activity additionally comprises designating each of said subchannels having said SNR less than said first least-SNR requirement and greater than said second least-SNR requirement as an impeded subchannel; and

said transmitting activity transmits said OFDM data so that each of said impeded subchannels receives said OFDM data at said intermediate subchannel signal level.

17. (original) An OFDM communication method as claimed in claim 16 wherein:

said producing activity additionally comprises designating each of said subchannels not designated as one of said clear subchannel and said impeded subchannel as an obstructed subchannel; and

said transmitting activity transmits said OFDM data so that each of said obstructed subchannels receives said OFDM data at said zero subchannel signal level.

18. (original) An OFDM communication method as claimed in claim 14 wherein said producing activity comprises:

determining a signal-to-noise ratio (SNR) for each of said subchannels in said plurality of subchannels within said wideband channel;

designating each of said subchannels having said SNR greater than a first least-SNR requirement as a clear subchannel;

designating each of said subchannels having said SNR less than said first least-SNR requirement and greater than a second least-SNR requirement as an impeded subchannel;

determining a noise level in response to said SNR for each of said clear and impeded subchannels; and

deducing an OFDM data-signal level for each of said clear and impeded subchannels, wherein a subchannel signal level is a sum of said OFDM data-signal level plus said noise level for each of said clear and impeded subchannels, and wherein said subchannel signal levels for each of said clear and impeded subchannels are substantially equal.

19. (original) An OFDM communication method as claimed in claim 18 wherein said producing activity additionally comprises:

establishing a least-quality-of-service requirement for each of said clear and impeded subchannels; and

optimizing a throughput of each of said clear and impeded subchannels in which a quality-of-service is greater than said least-quality-of-service requirement.

20. (original) An OFDM communication method as claimed in claim 18 wherein said producing activity additionally comprises:

establishing a least-throughput requirement for each of said clear and impeded subchannels; and

optimizing a quality-of-service of each of said clear and impeded subchannels in which a throughput is greater than said least-throughput requirement.

21. (original) An OFDM communication method as claimed in claim 14 additionally comprising iterating said producing and transmitting activities.

22. (currently amended) An orthogonal frequency-division multiplex (OFDM) communication system utilizing a plurality of subchannels within a noncontiguous wideband channel, said system comprising:

an OFDM receiver configured to obtain a signal-to-noise ratio (SNR) for each subchannel in said plurality of subchannels within said wideband channel, wherein said OFDM receiver comprises

a scanning section configured to scan each of said subchannels in said plurality of subchannels within said wideband channel,

a detection section coupled to said scanning section and configured to obtain said

SNR for each of said subchannels, and

an evaluation section coupled to said detection section and configured to designate as a clear subchannel each of said subchannels having a SNR greater than a least-SNR requirement; and

an OFDM transmitter in communication with said OFDM receiver and configured to transmit OFDM data so that said OFDM receiver receives said OFDM data in each subchannel within said plurality of subchannels within said wideband channel at one of a zero subchannel signal level, a predefined maximum subchannel signal level which is greater than the zero subchannel signal level, and ~~an~~ a predefined intermediate subchannel signal level which is greater than the zero subchannel signal level and less than~~, and a~~ the maximum subchannel signal level, in response to said SNR therein.

23. (canceled)

24. (currently amended) An OFDM communication system as claimed in claim ~~23~~ 22 wherein said OFDM transmitter is configured to transmit said OFDM data so that said OFDM receiver receives said OFDM data in each of said clear subchannels at said maximum subchannel signal level.

25. (currently amended) An OFDM communication system as claimed in claim ~~23~~ 22 wherein:

said least-SNR requirement is a first least-SNR requirement;

said evaluation section is additionally configured to designate as an impeded subchannel each of said subchannels having a SNR less than said first least-SNR threshold and greater than a second least-SNR requirement.

26. (previously presented) An OFDM communication system as claimed in claim 25 wherein said OFDM transmitter is configured to transmit said OFDM data so that said OFDM receiver receives said OFDM data in each of said impeded subchannels at said intermediate subchannel signal level.

27. (original) An OFDM communication system as claimed in claim 26 wherein:

said intermediate subchannel signal level is one of a plurality of intermediate subchannel signal levels; and

said OFDM transmitter is configured to transmit said OFDM data so that said OFDM receiver receives said OFDM data in each of said impeded subchannels at one of said plurality of intermediate subchannel signal level s in response to said SNR thereof.

28. (original) An OFDM communication system as claimed in claim 25 wherein said evaluation section is additionally configured to designate as an obstructed subchannel each of said subchannels not designated as one of said clear subchannels and said impeded subchannels.

29. (original) An OFDM communication system as claimed in claim 28 wherein said OFDM transmitter is configured to transmit said OFDM data so that said OFDM receiver receives said OFDM data in each of said obstructed subchannels at said zero subchannel signal level.

30. (original) A method of orthogonal frequency-division multiplex (OFDM) communication via a plurality of subchannels within a noncontiguous wideband channel, said method comprising:

determining a signal-to-noise ratio (SNR) for each of said subchannels in said plurality of subchannels within said wideband channel;

designating as a clear subchannel each of said subchannels in which said SNR is greater than or equal to a first least-SNR requirement;

designating as an impeded subchannel each of said subchannels in which said SNR is less than said first least-SNR threshold and greater than or equal to a second least-SNR requirement;

designating as an obstructed subchannel each of said subchannels not designated as one of said clear subchannels and said impeded subchannels; and

transmitting OFDM data so that each of said clear subchannels receives said OFDM data at a maximum subchannel signal level, each of said impeded subchannels receives said OFDM data at an intermediate subchannel signal level, and each of said obstructed subchannels receives said OFDM data at zero subchannel signal level.